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plies for an indefinite period by *agamogenesis* (or birth without a previous union of the male and female elements). This tree, "which has been propagated throughout Europe, does not seed in Europe."

ON THE PERIOD AND RATIO OF THE ANNUAL INCREASE IN THE CIRCUMFERENCE OF TREES.—"The Carolina Poplar (*Populus monilifera* Ait.) was selected on account of its rapid growth, enabling me to easily note the increase of circumference each seven days. The results tabulated, show that—

"The tree increased in growth only during the three months between the middle of May and the middle of August, and that the ratio of growth is much greater during the month between the middle of June and the middle of July, than during the month preceding, and the succeeding months."—T. MEEHAN, *Proceedings of the Academy of Natural Sciences, Philadelphia, October*, 1866.

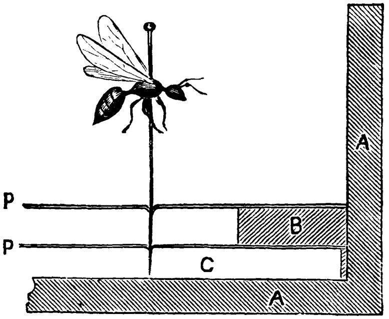
THE AGENCY OF INSECTS IN FERTILIZING PLANTS.—I have made some observations and experiments on the fertilization of Phænogamous Plants, showing that in the genus *Kalmia*, and other genera also, insects are necessary to carry pollen from flower to flower in order to fertilize pistils.

I have found, also, that of many plants which produce perfect flowers, in some the stamens discharge all this pollen before the stigmas of the same flower are exposed; while there are others in which the pistil is fertilized before the pollen of the flower is discharged. In these two ways they act as though they were monœcious plants.—W. J. BEAL.

CURIOUS FLOWER.—One of the most singular flowers growing in this pretty garden (of the Panama Railway Company) was an orchid, called by the natives "Flor del Espiritu Santo," or the "Flower of the Holy Ghost." The blossom, white as Parian marble, somewhat resembles the Tulip in form; its perfume is not unlike that of the Magnolia, but more intense. Neither its beauty nor fragrance begat for it the high reverence in which it is held, but the image of a dove placed in its centre. Gathering the freshly-opened flower, and pulling apart its alabaster petals, there sits the dove; its slender pinions droop listlessly by its side; the head inclining gently forward, as if bowed in gentle submission, brings the delicate beak, just blushed with carmine, in contact with the snowy breast.—J. K. LORD'S "*The Naturalist in Vancouver Island.*"

ZOÖLOGY.

MIMETIC FORMS AMONG INSECTS.—Among the living objects mimicked by insects are the predaceous species, from which it is the interest of the mimickers to be concealed. Thus, the species of Scaphura (a genus of Crickets) in South America resemble, in a wonderful manner, different Land Wasps of large size, which are constantly on the search for crickets to provision their nests with. Another pretty cricket which I observed was a good imitation of a Tiger Beetle, and was always found on trees frequented by the Beetles (*Odontocheilæ*). There are endless instances of predaceous insects being disguised, by having similar shapes and colors to those of their prey,—many Spiders are thus endowed; but some hunting Spiders mimic flower-buds, and station themselves motionless on the axils of leaves and other parts of plants, to wait for their victims.—H. W. Bates, *Linnæan Transactions*, 1862, p. 509.



A new Insect Box.—The necessity for a cheap, and efficient insect box, has long been experienced by collectors. Sheet cork is not only expensive, but oftentimes difficult to procure; linings of pith require a good deal of management to make neat and even surfaces. The following plan is offered, after testing its merits for several years, not only in cases used for the transportation of specimens, but in those intended for permanent exhibition. A box is made of the required depth, and a light frame is fitted to its interior. Upon the upper and under surfaces of this frame, a sheet of white paper (drawing, or log paper answers the purpose) is securely glued. The paper having been previously dampened, in drying contracts and tightens like a drum-head. The frame is then secured about one-fourth of an inch from the bottom of the box, and the pin is forced down through the two thicknesses of paper, and if the bottom of the box be of soft pine, the point of the pin may be slightly forced into it. It is thus firmly held at two or three different points, and all lateral movements are prevented. Other advantages are secured by this arrangement, besides firmness; when the box needs cleaning or fumigation, the entire collection may be removed by taking out the frame; or camphor, tobacco, or other material can be placed on the bottom of the box, and concealed from sight. The annexed figure represents a transverse section of a portion of the side and bottom of the box with the frame. A, A, box. B, frame. P, P, upper and under sheets of paper. C, space between lower sheet of paper and bottom of the box.—E. S. Morse.

HABITS OF THE CARPENTER BEES.—I send specimens in alcohol of the pupa of *Xylocopa virginica*, the Carpenter Bee, with the pupæ of *Anthrax sinuosa*. The latter fly I take to be a parasite of the Carpenter Bee. I found them occupying alternate cells or divisions in the mines of the Xylocopa. *Ceratina dupla*, a little green bee, allied to the Carpenter Bee, is now (May 18) busily boring and laying its eggs in almost every variety of pithy stems, such as the Elder and Syringa.—JAMES ANGUS, *West Farms, N. Y.*

PARASITES OF THE HUMBLE BEE.—I have lately obtained four specimens of a moth, *Helia Americalis*, from a Bombus nest kept since last fall in a flower-pot, covered with a glass.—*Ib.*

GEOLOGY.

ON THE ABSENCE OF THE NORTHERN DRIFT FORMATION FROM THE WESTERN COAST OF NORTH AMERICA, AND FROM THE INTERIOR OF THE CONTINENT.—Prof. Whitney made some remarks on the absence of the Northern Drift formation from the western coast of North America, and from the interior of the continent, throughout the region to the south-west of the Missouri River.

The term "Northern Drift" is understood to include the masses of unstratified detrital materials and boulders which have been transported and distributed by some general cause, independent in a great degree of the present conformation of the surface and of the direction of the existing river courses. The investigations of geologists have shown that the surface of Canada, New England, and the States north of the Ohio and north of the parallel of thirty-nine degrees, as far west as the Mississippi, and even for some distance beyond it in that direction, are covered by detrital materials which have been carried from the north towards the south, and often for a great distance and in immense masses.

The explorations of the Geological Survey of California have demonstrated, however, that there is no true Northern Drift within the limits of this State. Our detrital materials, which often form deposits of great extent and thickness, are invariably found to have been dependent for their origin and present position on causes similar to those now in action, and to have been deposited on the flanks and at the bases of the nearest mountain ranges by currents of water rushing down their slopes. While we have abundant evidence of the former existence of extensive glaciers in the Sierra Nevada, there is no reason to suppose that this ice was, to any extent, an effective agent in the transportation of the superficial detritus now resting on the flanks of the mountains. The glaciers were confined to the most elevated por-